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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/872,145

06/01/2001

Douglas J. McKnight

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11/15/2004

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EXAMINER

HA, NATHAN W

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/872,145

Applicant(s)

MCKNIGHT ET AL.

Examiner

Nathan W. Ha

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Cancellation of claims 36-94 is acknowledged.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakamura, US 2001/0022401, previously cited.

In regard to claims 1, 8, 22, in fig.1b, Nakamura discloses a display apparatus comprising:

- a display medium, included in the substrate 20;
- a transparent substrate 10, see [0058] line 3;
- a non-transparent substrate 20, said display medium being disposed between said transparent substrate and said non-transparent substrate; and
- an adhesive material 40 coupling said transparent substrate and said non-transparent substrate said adhesive material being disposed proximate to a channel

Art Unit: 2814

which is in at least one of said transparent substrate and non-transparent substrate.

See [0065] col. 5, lines 1-4.

In regard to claim 2, wherein said display medium is a liquid crystal material. See [0057], line 7.

In regard to claims 3-4, 9-10, 18,23-24, wherein at least one of said transparent substrate and said non-transparent substrate is made of silicon, glass. See [0091].

In regard to claim 5, the device as disclosed in the above cited art is an IC device, solid state image device, for example.

In regard to claims 6, 11, 25, Nakamura further discloses wherein said adhesive material is disposed adjacent to said channel. See fig. 1b.

In regard to claims 7, 12, 26, wherein a flow of the adhesive material in a direction away from a display area is minimized. See also, fig. 1b.

In regard to claims 13-14, 27-28, and 31-32, Nakamura further discloses the device comprising a display medium, a solid-state image sensor, for example. See [0057], line 7.

In regard to claims 15, 29, the device comprising at least a first metal layer 12 and a second metal layer 14, electrodes. See fig. 1b and [0062].

In regard to claims 16, 30, Nakamura further comprises a passivation dielectric layer 44, fillet layer. See fig. 1b and [0065], line 4.

In regard to claim 17, Nakamura further comprises a liquid crystal material wherein said liquid crystal material is disposed between said transparent

substrate and said non-transparent substrate. See above discussions regarding to claim 1.

In regard to claims 19 and 33, wherein at least one of said transparent substrate and said non-transparent substrate has a conductive layer 12 or 14 coupled therewith. See fig. 1b.

In regard to claims 20 and 34, Nakamura further comprises a conductive crossover material 21 wherein said conductive crossover material is disposed between said conductive layer and at least one of said first metal layer and said second metal layer. See also, fig. 1b.

In regard to claims 21 and 35, Nakamura further comprises at least one bond pad 22 coupled with at least one of said first metal layer and said second metal layer. See fig. 1b.

Response to Arguments

3. Applicant's arguments filed 8/6/04 have been fully considered but they are not persuasive. For instance, Applicants contend that the cited art, Nakamura, does not disclose a channel in the substrate. This feature is indeed found in Nakamura's figs. 1b and 12c, for example, wherein element 10 is attached to the substrate 20 with an adhesive layer which partially disposed in a trench, or tunnel. It should be noted that the substrate in these figure includes elements 20 and at least 32. The trenches or tunnels are formed between these elements.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan W. Ha whose telephone number is (571) 272-1707. The examiner can normally be reached on M-TH 8:00-7:00(EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nathan Ha
November 8, 2004



LONG PHAM
PRIMARY EXAMINER